

FEDSIM WRITERS GUIDE

Revision 2

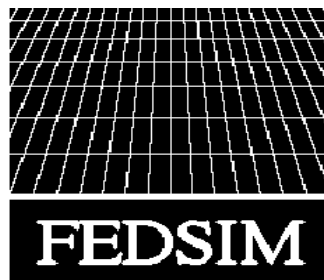
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Prepared by:

FEDERAL SYSTEMS INTEGRATION AND MANAGEMENT CENTER

Prepared for:

**DEPUTY COMMISSIONER FOR
INFORMATION TECHNOLOGY INTEGRATION
INFORMATION TECHNOLOGY SERVICE**



Federal Systems Integration
and Management Center

5203 Leesburg Pike, Suite 1100
Falls Church, VA 22041

FOREWORD

The Office of Information Technology Integration (OITI) would like to thank those involved in the development of this document.

Tal Dredge
Gregory Haralambopoulos
Bernadette Jones
Steve Kempf
Sue Latham
Vicki Lillicrapp
Bill Linder
Bob Padgett
Paul Smith
Wendy Stan
Jeff Tucker
Joyce Weishaupt

Lawrence S. Cohan
Deputy Commissioner for
Information Technology Integration

EXECUTIVE SUMMARY

The Federal Systems Integration and Management Center (FEDSIM) prepared the *FEDSIM Writers Guide* to establish a standard format for documents it produces and to serve as a guide for FEDSIM employees and contractors.

All FEDSIM documents prepared for a client will be prepared in accordance with the prescribed format and guidelines unless a waiver is granted by the responsible FEDSIM division director. All FEDSIM documents prepared for Governmentwide distribution will be prepared in accordance with the prescribed format and guidelines unless a waiver is granted by the Deputy Commissioner for Information Technology Integration.

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1. INTRODUCTION

This document follows the guidelines it provides. For quick reference or clarification of the guidelines, use this document's format as an example.

1.1 Background

The Office of Information Technology Integration (OITI) first published a writers guide in December 1986. A revised version was issued in March 1993 for OITI's Federal Systems Integration and Management Center (FEDSIM) and called the *FEDSIM Writers Guide*. This revision of the March 1993 guide presents the document prepared in Word for Windows, introduces minor changes, and corrects errors.

1.2 Objective

The document's objective is to provide style, format, and content guidance to FEDSIM staff and contractors in preparing FEDSIM documents. The guide defines FEDSIM document categories and required contents. It provides standard formats and guidelines for developing, writing, and reproducing deliverables.

1.3 Applicability

FEDSIM staff and contractors shall prepare all FEDSIM documents according to this guide. The types of FEDSIM documents are described in Section 2, Document Types and Content. Exceptions are permissible. The releasing authority (the director who signs the foreword page) must agree to requested deviations from this guide. This guide does not apply to FEDSIM's contracting documents, such as quick response proposal (QRP) requests, requests for proposals (RFPs), and related documents.

1.4 Document Organization

This document contains five narrative sections. Section 1, Introduction, provides brief background information and states the guide's objective and applicability. Section 2, Document Types and Content, introduces FEDSIM documents, their roles and functions, and the roles of preparers and defines various document types and their required content. Section 3, Style Guidelines, states the FEDSIM style authority and highlights certain style guidelines preferred by FEDSIM. Section 4, Format Guidelines, details document format and typing requirements, illustrated with "how to" exhibits. Section 5, Document Reproduction, sets forth reproduction and binding requirements for draft and final versions of documents.

2. DOCUMENT TYPES AND CONTENT

This section defines categories of FEDSIM documents and provides guidance on document content.

FEDSIM documents are orderly presentations of information addressing specific aspects of a project or issue. They must provide sufficient information to document thoroughly the issue(s) under study. FEDSIM documents also must be:

- Self-explanatory and able to stand alone
- Clearly understandable
- Useful at every level of distribution

FEDSIM encourages its staff and contractors to make generous use of exhibits (charts, tables, illustrations, and diagrams) to supplement the document narrative. Exhibits help explain the narrative by providing compact visual representations of data or information.

2.1 Relationship of FEDSIM Agreements and Documents

FEDSIM defines its relationship with Federal clients through interagency agreements. A FEDSIM interagency agreement has two parts: a basic agreement (BA) and one or more project element plans (PEPs). Basic agreements identify the scope and general requirements of the interagency agreement, define deliverables, estimate client costs, and provide a funding mechanism. Separate project element plans written under an agreement detail the work to be done, describe deliverables in more detail, provide a schedule of milestones, and estimate costs.

A written deliverable is typically a FEDSIM document (report, technical product, working paper) and is identified as such in a project element plan. The document has a specific deliverable date. Monthly reports to the client track its progress.

2.2 Document Preparation Roles and Responsibilities

FEDSIM analysts serve as project managers. These analysts either (1) conduct or manage the conduct of in-house projects or (2) provide project management for projects contracted out. A higher-level technical manager oversees projects and reviews documents produced by project managers at the working level. The most important points of preparation for documents (or points of review for contractor-prepared documents) are the project manager and technical manager. The project manager and technical manager are the key persons responsible for ensuring that document content is complete, thorough, appropriate, and acceptable.

2.3 Document Releasing Authority

The document releasing authority is the FEDSIM division director who releases a finished document for delivery to the client. (Drafts released to clients for review do not require releasing authority signature, unless the division director so directs.) When a division director is on leave, the division director may delegate this authority to a designated deputy. The division director may not delegate this authority to anyone else. The releasing authority signs on the foreword page.

The document releasing authority has ultimate responsibility for all aspects of a FEDSIM document. This person is responsible for ensuring that the document is complete and accurate, complies with specifications as agreed to in the project element plan, is written and published in accordance with this writers guide, and reflects the highest standards of quality and excellence. The document releasing authority is responsible for ensuring that the recommendations and conclusions are fully supported by the findings of the study.

For Governmentwide publications, the FEDSIM division director obtains approval to publish from the Deputy Assistant Commissioner, OITI, who will also provide information as to who, if anyone, will sign as the document releasing authority. The Deputy Assistant Commissioner will obtain approval from the Deputy Commissioner.

QRP requests (Section E, Inspection and Acceptance) also can call for releasing authority by contractors preparing documents for FEDSIM. Contractor release signatures are only for FEDSIM use and are not part of the draft or final FEDSIM deliverable sent to the client.

EXAMPLE:

<p>SECTION E. INSPECTION AND ACCEPTANCE (I&A) (Cont'd)</p> <p>E.1.5 <u>Review and Sign Before submission</u></p> <p>All draft and final documents shall be reviewed and signed by (1) a technical editor and (2) a corporate senior management official before being delivered to FEDSIM.</p>

2.4 Document Categories

There are five FEDSIM document categories:

- Report
- Technical product
- Working paper
- Letter of findings
- Governmentwide publication

2.4.1 Report

A FEDSIM report transmits project information and thoroughly documents the analysis and findings. The following document body sections (see 2.6.7 through 2.6.14) are required in reports: introduction, study environment, assumptions and constraints, methodology, analysis and findings, and either conclusions or recommendations or both, as appropriate.

2.4.2 Technical Product

A FEDSIM technical product is either (1) an information product containing little or no documented activities or analyses, or (2) essentially a FEDSIM report that does not have (or call for) conclusions and recommendations. The presence of appropriate and necessary conclusions or recommendations or both is an important distinction between the FEDSIM report and the FEDSIM technical product. Technical products typically are users manuals, benchmark execution procedures, model documentation, technical portions of requests for proposals, evaluation guides, project plans, etc. Or, technical products might include requirements statements, cost/benefit analyses, results of research, etc., for which no particular conclusions or recommendations may be called for.

2.4.3 Working Paper

A working paper provides interim or tentative information or brings issues to the client's attention. A working paper is generally nothing more (or less) than an in-progress document that may or may not be included in a subsequent report (or other document). Working papers may document activities, analyses, findings, and conclusions, and can include -- but are not required to include -- all sections for which FEDSIM has the information, data, or analysis at the time the working paper is prepared. Working papers do not purport to represent final technical findings or conclusions. Working papers do not contain recommendations. If deemed appropriate and necessary, recommendations may be included under the heading Summary. A working paper must have on its title page an explicit disclaimer suggesting its tentative nature (see 2.6.1, Title Page).

2.4.4 Letter of Findings

A letter of findings, prepared in correspondence format, provides a quick means to send information to a client or may be used to respond to a client's request for additional information. A letter of findings transmits data, findings, conclusions, or recommendations with little documented evaluative activities or analysis. The content requirements will vary, consequently FEDSIM does not dictate a rigid format. A letter of findings may be sent when time constraints imposed by the client preclude preparation of another type of formal document, but it should not be used to replace a required deliverable. Exhibits can be used to illustrate information, and enclosures are acceptable.

2.4.5 Governmentwide Publication

FEDSIM's Governmentwide publications provide information of broad interest to the Federal information technology community. These documents are typically general in nature within a specific information technology area. FEDSIM's Governmentwide publications follow the format used in this guide.

2.5 Drafts

Drafts allow the client to review a document before FEDSIM reproduces it in final form. FEDSIM analysts and contractors should develop drafts according to this guide and in a way that few, if any, content changes will be necessary. Typing, spelling, grammar, or format errors should rarely occur in drafts. Analysts and contractors should prepare drafts as if they were to be the final version, with the exception that FEDSIM may require a contractor to prepare a draft in double-spaced format. A draft must have on its title page an explicit disclaimer indicating its tentative nature. (The disclaimer appears below, under Title Page.)

2.6 Document Contents

Sections required for different types of documents vary with the category of the document. Exhibit 2-1 shows the front matter requirements. Exhibit 2-2 shows the sequence in which sections should appear.

R = Required O = Optional	PROJECT REPORT	TECHNICAL PRODUCT	WORKING PAPER	GOV'TWIDE PUBLICATION
Cover	R	R	O ¹	R
Title Page	R	R	R	R
Foreword	R	R	R	O
Executive Summary	R	R	R	R
Table of Contents	R	R	R	R
List of Exhibits ²	O	O	O	O
List of Acronyms ³	O	O	O	O

¹Not required and not normally used but may be used.

²Required when more than one exhibit is present.

³Required when more than 20 acronyms are present.

DOCUMENT FRONT MATTER REQUIREMENTS

Exhibit 2-1

FRONT MATTER	DOCUMENT BODY (TEXT) SECTIONS	REFERENCE MATTER
Cover	Introduction	Notes
Title Page	Study Environment	Glossary
Foreword	Assumptions and	Bibliography
Executive Summary	Constraints	Appendices
Table of Contents	Methodology	
List of Exhibits	Analysis and	
List of Acronyms	Findings	
	Conclusions	
	Recommendations	
	(Summary)	

DOCUMENT CONTENT SEQUENCE

Exhibit 2-2

2.6.1 Title Page

The title page contains the name and address of the client agency, name of preparing FEDSIM division, release date (month and year), type of document (optional), document title, and FEDSIM project number.

For drafts and working papers, the title page contains the following disclaimer:

“This draft (or working paper) is not an official FEDSIM report. The views or conclusions expressed have not been through the complete review process and may be expanded, modified, or withdrawn at any time.”

2.6.2 Foreword

The foreword, signed by the releasing authority, acknowledges the preparers. It contains names of FEDSIM personnel and may include names of any contractor or client staff who worked on the project. Do not include contractor firm names, and do not include titles associated with names listed.

2.6.3 Executive Summary

The executive summary presents a general overview. Its contents differ depending on whether the project documentation involves one or several documents.

2.6.3.1 One-document Projects

When a project has only one written deliverable, the one document should provide enough detailed information to enable the reader to understand the objectives of the project, significant issues and major findings, conclusions, and recommendations. The document's executive summary should reflect the concerns of the client. All information included in the executive summary should be adequately supported by discussion and analysis in the body of the document. The executive summary should maintain the same general organization as the body of the document. It generally contains:

- A brief statement (a few sentences) about the project including the name of the client agency and relevant organization(s) within the agency
- The project mission and its general and specific objectives; why the project needed to be done; and, if appropriate, how the document will be used
- Background information that client agency management may need to place the document's contents in context

- If appropriate, a short discussion of the overall approach used to conduct the study
- A list of major findings and conclusions of interest at the level of the signer of the project agreement with only enough narrative to convey the information clearly
- A list of the document's major recommendations that require action or approval at that management level and a brief summary of the other recommendations

2.6.3.2 Multiple-document Projects

When a document is one of several to be produced for a project, the document's executive summary should relate primarily to the document, not to the overall project.

The executive summary should briefly describe the overall project and its objectives but give more emphasis to the objectives of the document. It should explain how the work performed and documented relates to the overall project. This important front matter section should provide enough detailed information to enable the reader to understand the specific document's objectives, significant issues and major findings, conclusions, and recommendations.

The executive summary should reflect the concerns of the client. All information included in the executive summary should be adequately supported by discussion and analysis in the body of the document. The executive summary should maintain the same general organization as the body of the document. It generally contains:

- A brief statement (a few sentences) about the project including the name of the client agency and relevant organization(s) within the agency
- The project mission and its general and specific objectives; why the project needed to be done
- The specific objectives of that portion of the project work covered by the document, and, if appropriate, how the document will be used
- Background information that client agency management may need to place the document's contents in context
- If appropriate, a short discussion of the approach used to perform the work documented
- A list of major findings and conclusions of interest at the level of the signer of the project agreement with only enough narrative to clearly convey the information

- A list of the document's major recommendations that require action or approval at that management level and a brief summary of the other recommendations

2.6.4 Table of Contents

The table of contents lists the document section and subsection headings, reference matter, and their respective page numbers. The document author determines the level to which the table of contents needs to be written to help the reader find topics, but it should not exceed three levels of subheadings.

2.6.5 List of Exhibits

The list of exhibits is a list similar to the table of contents. A document should have a list of exhibits when it contains more than one exhibit.

2.6.6 List of Acronyms

The list of acronyms provides their meaning and helps the reader understand the document. A document should have a list of acronyms when it contains more than twenty acronyms used extensively throughout the document. The list of acronyms should not be confused with the glossary (see 2.6.16, Glossary), which defines uncommon technical terms.

2.6.7 Introduction

This section introduces the reader to the project. It provides background information that will help the reader readily understand the objective of the project and the situation under study. Types of information appropriate for the introduction are:

- The client agency, its mission, and responsibilities (as pertaining to the project)
- Background information on the situation that led to the project's existence
- A brief discussion of overall FEDSIM support related to the project
- Specific project objectives
- The statement of work and any modifications
- The relationship of the document to other documents prepared in support of the project
- Intended audience and how the client may use the document, including any restrictions

- Document organization

An introduction section is required for reports. For other documents, either use an introduction section or organize the text to accommodate the purpose of the document. When a FEDSIM document is the shell to transmit material prepared in another format required by the client, the only FEDSIM document sections necessary in the FEDSIM format are the front matter sections and the introduction.

2.6.8 Study Environment

The study environment defines in detail the situation under study. It places the study in proper context in reference to the organization, mission, etc. This section describes those elements that define the problem the study addresses. All relevant elements of the study's environment should be covered in sufficient detail. The reader must have an adequate factual basis to understand the study's methodology. The reader must be able to interpret the study's conclusions and recommendations.

The information contained in the study environment section depends on the subject and areas covered by the study. This section should discuss only those elements having a direct bearing or that will help the reader put the study in perspective. Coverage might include such information as:

- Client agency organization and mission
- Functional/business processes
- Hardware/software
- Communications
- Operating procedures
- Background or status of a system, project, or program
- Definition of a system under study
- Quality, audit, and security controls
- Safety and environmental controls

2.6.9 Assumptions and Constraints

This section presents any assumptions or constraints that affected the results and outcome of the project. Certain assumptions or constraints are present for every project (e.g., set cost, time constraints, limited data). Special care should be taken to identify and explain only those assumptions or constraints that could affect the project or interpretation of the conclusions or recommendations. The rationale for adopting the assumptions should be addressed and the ramifications to the project should the assumptions be incorrect.

2.6.10 Methodology

The methodology section contains a brief description of the general approach taken in the study and the specific analytical methods and techniques used. If appropriate, it explains the rationale for adopting a particular approach or technique and describes alternatives considered.

2.6.11 Analysis and Findings

This section is a narrative description of the specific results of the study's activities. It focuses on the information found during the study and on the findings arrived at by analyzing the information. Where possible and appropriate, tables, charts, figures, and illustrations support the narrative description. Addressed in this section are all project objectives stated in the introduction. This section contains sufficient detail to ensure that the reader will fully understand the basis of the study's summary, conclusions, or recommendations. The material presented should be balanced and should:

- Clearly state conditions, causes, criteria, and effect
- Be explicit
- Have adequate evidence for support
- Describe the objective analysis

This section presents data according to the method most applicable to the particular project. The usual patterns of arrangement are:

- Time order
- Importance
- Familiarity
- Comparison and contrast
- Inductive and deductive supportive arguments

2.6.11.1 Time Order

Within the narrative, events may be arranged chronologically. A work-flow analysis, for example, may trace a sequence of processes from initial through interim stages to conclusion. Sometimes a reverse chronological order may be necessary. Before-after and present-future techniques also may be used. An example outline of these orders follows:

- Conditions Before Installation of ASR-33 Teletype Terminal
- Conditions After Installation of ASR-33 Teletype Terminal
- Present Method
- Proposed Method

2.6.11.2 Importance

Parallel ideas may be arranged from most important to least important. The reverse (i.e., from least to most important) may avoid having the reader's attention wane.

2.6.11.3 Familiarity

Ideas familiar to a reader may be more likely to capture interest than those that are unfamiliar. A reader can be led from the familiar to the unfamiliar, and from the known to the unknown.

2.6.11.4 Comparison and Contrast

Use comparison and contrast to treat similarities and differences, advantages and disadvantages, efficiencies and deficiencies, or almost any information that can be alternated, rotated, or matched in a point-by-point manner, as shown below:

- Features of Control Data Corporation Model XXX
 - ◊ Space Requirements
 - ◊ Cost
 - ◊ Performance
- Features of IBM 370 Model 1870

2.6.11.5 Inductive and Deductive Support

Information leading to a conclusion may be arranged by either inductive or deductive supportive statements. The inductive order generally proceeds from an examination of the facts, reasons, or evidence to the conclusion as a result of that information. In other words, it moves from the specific to the general. The deductive order progresses from the conclusion to the supporting information, i.e., from the general to the specific.

In a series of parallel sections, the sections should be arranged either inductively or deductively. Individual paragraphs within each section may be developed one way or the other. This means that the topic sentence may come at the end (inductive) or at the beginning (deductive) of the paragraph. FEDSIM prefers paragraphs that begin with topic sentences, since this method aids comprehension. When dealing with the larger units of the report, writers should try to consider not only the reader's convenience in using the report but also the reader's attitudes or feelings on the subject. The less likely the reader is to accept the conclusion, the more reason for using the inductive order of supportive statements, i.e., withholding the conclusion until giving the supporting evidence.

2.6.12 Conclusions

Writers should use judgment in making conclusions and base conclusions on the analysis. A conclusion can be disputed, whereas a finding is indisputable and based strictly upon facts.

A study result or conclusion is appropriate for this section when it deserves special emphasis. This emphasis may be deserved either because (1) the study's objectives explicitly call for evaluative judgment to be made in this area or (2) one or more of the study's significant recommendations directly depends on the study conclusion. The writer should define the degree of confidence to be placed in each conclusion and any limitations on interpretation that may be appropriate.

Each conclusion must:

- Suggest the significance and implication of findings
- Not rehash findings
- Be a bridge between findings and recommendations

Each conclusion should be explicitly related to the purpose of the study. Conclusions should be shown to follow logically from the findings and analysis. Conclusions not addressing study objectives should not be included without explanation.

A conclusions section also can be used to summarize data from the analysis and findings section.

2.6.13 Recommendations

Recommendations are official proposals for solving a problem under study. Any recommendation made in a report must be based on a thorough and well-developed analysis of the problem under study. All recommendations must be fully supported by information in the analysis and findings and conclusions sections. Any conditional qualifications placed on the recommendations should be explicitly defined.

Recommendations must:

- Address the problem under consideration
- Be specific
- Be workable
- Recognize the agency's position and environment

Recommendations should be explicitly related to the purpose of the study as stated in the introduction and must be shown to follow logically from the study's findings and analysis. Recommendations that do not address specific study objectives should not be included without explanation.

A recommendations section also can be used to summarize data from the analysis and findings section.

2.6.14 Summary

A summary section can be used (in place of conclusions or recommendations) to summarize data from the analysis and findings section. The summary provides the reader with the most significant data of the study without excessive technical details. New information should not be introduced in this section.

Summaries are appropriate for working papers because conclusions are not always applicable and working papers do not include recommendations.

2.6.15 Notes

Notes show the origin of facts, opinions, and illustrative material. Notes can be used not only when quoting directly, but also when paraphrasing or summarizing what an author said, or to explain or support a statement in the narrative.

Superscript numbers located within the narrative serve as signals for footnotes or notes (also called endnotes). These raised numbers call attention to reference material or added information that will appear either (1) footnoted at the bottom of the page or (2) noted in a separate notes reference matter section at the back of the document.

2.6.16 Glossary

A glossary can be included in the reference matter at the back of the document to define uncommon technical terms used extensively throughout the document. The glossary should not be confused with the list of acronyms (see p. 4-7) which only provides the meaning of acronyms.

2.6.17 Bibliography

When a document cites five or more outside sources, a bibliography section listing references appears as a separate reference matter section at the back of the document. When citing fewer than five sources, writers choose between working references into the narrative or using footnotes on each page concerned.

This section also can be used to provide the reader with additional sources of reference, or varying sources such as lists of persons contacted or interviewed. Such lists usually contain names, position titles, and phone numbers.

2.6.18 Appendices

Appendices help readers understand the content of the document by (1) supporting or clarifying data presented or (2) providing additional information. Appendices generally present supplementary material that:

- Is necessary for completeness but would detract from an orderly and logical presentation if included in the main body of the text
- May not be of interest to management but would be valuable to a subject matter expert

The appendix is not the place for information addressing the project objective or purpose or for information describing the project environment.

2.6.19 Points of Contact

If deemed useful, the name, address, and telephone number of the client's and of FEDSIM's point of contact may be included as the last page of the document.

3. STYLE GUIDELINES

This section establishes FEDSIM writing style authority and outlines certain style guidelines preferred by FEDSIM. The guidelines given here do not cover all aspects of grammar or punctuation.

3.1 Style Authority

The FEDSIM style authority is the *United States Government Printing Office Style Manual*. For reference to computer terminology, consult Charles J. and Roger J. Sippl's *Computer Dictionary and Handbook* (latest version known to FEDSIM is 3rd edition, 1983, published by Howard W. Sams & Co., Inc., Indianapolis) or other reputable technical references.

3.2 Active Voice

Active voice clarifies writing. FEDSIM encourages using active voice. Active voice requires the subject of the sentence to act. In the passive voice, the subject is acted upon (as in this sentence). Active voice is more concise and vigorous. Passive voice is often “stuffy” and hides responsibility.

- Planning for information technology was overlooked by management. (Passive)
- Management overlooked planning for information technology. (Active; note that active voice made the sentence two words shorter)

A helpful technique for writing instructional documents where “you” is the understood subject is to begin sentences with verbs:

- The plan may now be carried out. (Passive)
- Carry out the plan. (Active; “you” is the subject understood)

3.3 Sexist Language

Avoid implying gender, e.g., use “staff-hours” for “man-hours.” Do not use constructions such as “s/he,” “she/he,” “he/she,” or “him/her.” Such usage calls attention to itself and detracts from the writing. When necessary, reconstruct the sentence to eliminate using sexist language.

3.4 Abbreviations and Acronyms

Introduce abbreviations and acronyms in parentheses immediately following the first use of the terms to which they apply, e.g., Office of Information Technology Integration (OITI) , data processing (DP).

Write out the full meaning the first time the abbreviation or acronym appears in a major narrative section, including the first time a state, province, or territory appears. Follow with the abbreviation or acronym in parentheses. Once introduced, use the abbreviation or acronym from then on throughout the document. If its use in a particular instance would cause the writing to be awkward or confusing, disregard this rule.

Do not introduce an abbreviation or acronym in the executive summary unless the abbreviation or acronym will appear later in the executive summary. Introduction in the executive summary does not negate the preceding requirement to introduce it the first time it appears in a major narrative section.

Be consistent with abbreviations and acronyms throughout the document. For example, do not use “FY 1993” in one instance and “FY 93” or “FY93” the next. Or, do not use “DP” in one instance and “ADP” the next.

Do not use apostrophes to form plurals of acronyms. Add the lower-case “s” (e.g., CPUs).

3.5 Capitalization

Use conventional capitalization. Capitalize proper nouns, but do not capitalize merely for emphasis. Capitalize only when capitalization is the rule. Capitalize all letters of command words (see 3.10, Command Words).

GSA style preference is to capitalize “Federal” and “Government” when they apply to the U.S. Government. Do not capitalize “agency” unless it is part of a proper noun, e.g., Environmental Protection Agency.

3.6 Contractions

Do not use contractions in technical writing.

3.7 Hyphenated Words

Use conventional hyphenation. Exhibit 3-1 lists commonly used words or phrases wherein hyphens should or should not be used.

USE A HYPHEN

1/4-inch radius	front-end processor	off-load
2-inch square	full-length	off-site
3-to-1 ratio	full-scale	on-line
5-to-4 vote	full-time employment	on-site
6-week session	Government-owned (U.S.)	self-explanatory
8-hour day	in-depth	staff-hour
10-day delay	in-house	stand-alone
back-up	keying-in	two-thirds
backing-up	non-Government	up-to-date totals
end-user needs	off-line	up-to-the-minute

DO NOT USE A HYPHEN

baseline	keycard	throughput
database	minicomputer	timesharing
decisionmaking	ongoing	turnaround
end user (noun)	percent	update
keyboard	queuing	workstation

OMIT THE HYPHEN WITH “WIDE” AS A SUFFIX

agencywide	Governmentwide	nationwide
Armywide	GSAwide	FEDSIMwide

USE OF THE HYPHEN

Exhibit 3-1

3.8 Comma

3.8.1 Before “and” in a Series

Use a comma before the “and” or “or” to separate three or more similar items in a series. Precede the final element in the series by “and” or “or” to show the nature and the end of the series. This basic A, B, and C pattern can be expanded to fit any number of elements.

- John, Frank, Ann, and Mary attended.
- Among the compatible systems are SPERRY-RAND 2600, UNIVAC 2000, and IBM System/360.
- The data center provides services to its users with applications hosted on four IBM computer systems: two IBM Model 3081 systems, one IBM Model 4381 system, and one IBM Model 3090-200 system.
- The center supports the agency’s financial management systems, its payroll processing system, and other major applications for personnel and payroll processing.

3.8.2 To Set Off State

Use a comma to set off the state (District of Columbia or U.S. possession) abbreviation. The comma appears before and after the abbreviation except when indicating possession.

- The project team met in Washington, DC, on April 10.
- They considered using St. Louis, MO, as a meeting site.
- Detroit, MI’s waterfront was a perfect test location.

3.8.3 To Set Off Year in a Specific Date

Use a comma to set off the year when citing a complete date. The comma appears before and after the year when the date appears between other words in the sentence.

- The committee held the meeting in Washington, DC, on April 10, 1992, at the agency headquarters.
- The contracting officer awarded the contract on September 23, 1991, and subsequently modified it on April 15, 1992.

Do not use a comma to set off the year when citing a non-specific date, i.e., when quoting only the month and year.

- They held a meeting in Washington, DC, in April 1992 at the agency headquarters.
- The contracting officer awarded the contract in September 1991 and subsequently modified it in April 1992.

3.9 System Names

Spell and punctuate names of computer systems (software and hardware) according to the practice of the manufacturer. Charles J. and Roger J. Sippl's *Computer Dictionary and Handbook* has a good section on system nomenclature for older models. Reference the complete name of the system in the first mention. If it will clarify the writing to shorten the name from then on, do so. Generally, reference computer systems in the following format:

COMPLETE REFERENCE	SHORTENED REFERENCE
IBM System/370 (Model 168)	I370/168
UNIVAC 1108 Multi-Processor	U1108MP
HONEYWELL Series 600/6000	H600/6000

3.10 Command Words

Capitalize all letters of command words, except endings as shown below. Form the plural of command words by adding an "s" or "es" in lower-case letters. Do not use apostrophes to form plurals of command words.

EXAMPLES: SAVEs SEARCHes QUERYs

To make a command word function as a verb in a sentence, add the appropriate verbal suffix in lowercase letters. Do not worry that an occasional misspelling may result.

EXAMPLES: SAVED SEARCHed QUERYed
 SAVEing SEARCHing QUERYing

4. FORMAT GUIDELINES

This section provides typing and format guidelines. The guidelines shall be followed unless the client requires otherwise. The releasing authority approves deviations.

4.1 Word Processing Software

Microsoft Word for Windows and WordPerfect word processing software are available on the FEDSIM network (MultiMate software is also available, but should not be used for the creation of new documents). This document demonstrates the use of Microsoft Word for Windows.

4.2 Font

The preferred fonts for FEDSIM documents are those from the proportionally-spaced Times Roman family. For documents prepared with Microsoft Word for Windows or WordPerfect for Windows, use Times New Roman. For documents prepared with WordPerfect for DOS, use CG Times. The point value for normal text is 12-point, illustrated by this sentence. Point values for headings are:

- **FIRST (SECTION) LEVEL.** The font at left is Times New Roman 14-point bold. Use this font for top of page headings for front matter sections, document body sections, and reference matter sections (including exhibits when a heading is placed at the top of an exhibit). Place two spaces or 0.1 inches between the section number and the section title.
- **Second (and Subsequent) Levels.** The font at left is Times New Roman 12-point bold. Use this font, typed in initial capital letters, for subsection headings under the section heading. Place two spaces or 0.1 inches between the subsection number and the subsection heading.

4.3 Justification

Do not right justify. Use a flush left margin, with a ragged right margin.

4.4 Indentation

Do not indent. Begin text flush left.

4.5 Hyphenation

Do not physically hyphenate. However, the software will automatically hyphenate under certain conditions.

4.6 Line Spacing

Drafts may be double or single spaced (as directed by the project manager). Single space final versions. Allow two blank lines of space after section headings. Allow one blank line of space before and after subsection headings. Allow one blank line of space between paragraphs. Do not carry over to the next page the last line of a paragraph (widow). Carry over at least two lines. Also, do not leave one line of a paragraph at the bottom of a page (orphan). Carry it over to the next page. Do not divide a three-sentence paragraph or subsection. Carry over the whole paragraph or subsection.

4.7 Pagination

Center page numbers one inch from the bottom of the page. Set up the format to allow at least two lines of space before the page number.

Number the front matter with lowercase Roman numerals. All material placed in front of the document body sections is considered the front matter. Consecutively number the document body sections with Arabic numerals within each section, e.g., 1-1, 1-2, 1-3, etc. Consecutively number the reference matter sections with Arabic numerals within each section, and use the first three consonants of the reference matter heading as the front part of the unique number (e.g., a Glossary would be numbered Gls-1, Gls-2, Gls-3; a Notes reference matter section would be numbered Nts-1, Nts-2, Nts-3). (See 4.18, Appendix Format, for instructions for page numbering appendices.) For documents to be reproduced double-sided (i.e., over 40 pages), begin each front matter section, document body section, and reference matter section on a facing (odd-numbered) page.

4.8 Margins

Documents will have one-inch top, bottom (including the page number), left, and right margins. The bottom margin may be decreased to one-half inch throughout the document when necessary, for example, to accommodate unusually large exhibits.

4.9 Front Matter Format

4.9.1 Title Page

Exhibits 4-1 and 4-2 illustrate the title page format. Center the following on preprinted FEDSIM title page paper:

- Document title
- FEDSIM project number
- Release date
- Prepared by: Federal Systems Integration and Management Center (and name of preparing FEDSIM division)
- Prepared for: (Name and address of client agency)

Type the following disclaimer at the top of the title page for drafts and working papers:

“This draft (or working paper) is not an official FEDSIM report. The views or conclusions expressed have not been through the complete review process and may be expanded, modified, or withdrawn at any time.”

The window cut-out on preprinted document covers permits display of the document title. In Exhibits 4-1 and 4-2, note the 3-inch top margin above the document title.

For one- or two-line titles, vary the location of the title so as to best display the title in the window. Include the FEDSIM project number and the release date showing through the window if there is sufficient space. Although not required, the type of document (e.g., report, technical product) also may be included on the title page.

4.9.2 Foreword

Locate the foreword on a facing page immediately following the title page. Center the heading Foreword in all capital letters. Allow two blank lines of space between the heading and the first line of text. Exhibit 4-3 illustrates the foreword page format.

4.9.3 Executive Summary

Locate the first page of the executive summary on a facing page immediately following the foreword page. Center the heading Executive Summary in all capital letters. Allow two blank lines of space between the heading and the first line of text. Prepare the executive summary in narrative form without subsections.

This draft (or working paper) is not an official FEDSIM report. The views or conclusions expressed have not been through the complete review process and may be expanded, modified, or withdrawn at any time.

**TITLE
OF
DOCUMENT**

Release Date (Month and Year, e.g., **June 1994**)

FEDSIM Project Number (e.g., 94025ARE-02)

Prepared by:

FEDERAL SYSTEMS INTEGRATION AND MANAGEMENT CENTER
Name of Preparing FEDSIM Division

Prepared for:

NAME OF CUSTOMER AGENCY
Street or P.O. Address of Customer Agency
City, State, and Zip Code

TITLE PAGE FORMAT -- DRAFT (OR WORKING PAPER)

Exhibit 4-1

**TITLE
OF
DOCUMENT**

Release Date (Month and Year, e.g., **June 1994**)

FEDSIM Project Number (e.g., 94025ARE-02)

Prepared by:

FEDERAL SYSTEMS INTEGRATION AND MANAGEMENT CENTER
Name of Preparing FEDSIM Division

Prepared for:

NAME OF CUSTOMER AGENCY
Street or P.O. Address of Customer Agency
City, State, and Zip Code

(LOGO)

Federal Systems Integration
and Management Center

5203 Leesburg Pike, Suite 1100
Falls Church, VA 22041

TITLE PAGE FORMAT -- FINAL VERSION OF DOCUMENT

Exhibit 4-2

FOREWORD

The Federal Systems Integration and Management Center (FEDSIM) would like to thank those involved in the development of this document.

John Poe
Mary Roe
Tom Toe

Dick Doe
Director
Name of Preparing FEDSIM Division
703-756-XXXX
(Include phone number at option of
division director)

FOREWORD PAGE FORMAT

Exhibit 4-3

4.9.4 Table of Contents

Locate the first page of the table of contents on a facing page immediately following the executive summary. Center the heading Table of Contents in all capital letters. When the table of contents covers more than one page, repeat the heading at the top of the next page(s) with Cont'd in parentheses. Allow two blank lines of space between the heading and the first line of text.

Exhibit 4-4 and the table of contents for this guide illustrate the table of contents format. Do not include in the table of contents any further subsection level than the fourth level.

4.9.5 List of Exhibits

Place the list of exhibits on a separate facing page after the table of contents. Center the heading List of Exhibits in all capital letters. Allow two blank lines of space between the heading and the first line of text. Include the same type of information as the table of contents. Exhibit 4-5 illustrates a list of exhibits.

4.9.6 List of Acronyms

Place the list of acronyms on a separate facing page after the list of exhibits. Center the heading List of Acronyms in all capital letters. Allow two blank lines of space between the heading and the first line of text. List acronyms alphabetically on the left, with acronym meanings on the right. Exhibit 4-6 illustrates a list of acronyms.

4.10 Heading and Subheading Format for Document Body Sections

Type the section title heading in all capital letters centered at the top of the page on a facing page. Enter two lines of space between the section title and the first line of text.

Subdivide major sections into logically grouped information. Type subsection headings in initial capital letters. Type prepositions, conjunctions, and articles in lower case. Avoid long subsection headings. Do not use stand-alone subsections. Move to the next subsection level only if there will be two or more headings at that level.

TABLE OF CONTENTS

	Page
1. INTRODUCTION	
1.1 Background	1-1
1.2 Project Overview.....	1-2
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1.4 Organization of Document	1-3
2. STUDY ENVIRONMENT	
2.1 Organizational Environment	2-1
2.1.1 DOS Organizational Mission and Structure	2-1
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2.1.2.1 Systems Programming Branch.....	2-3
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2.1.2.3 Facilities Management Branch	2-3
2.2 FADPC Technical Environment.....	2-6
2.2.1 FADPC Hardware Architecture.....	2-6
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2.2.1.3 Orange System Hardware Architecture	2-7
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2.2.2 FADPC Communications Architecture	2-8
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TABLE OF CONTENTS FORMAT

Exhibit 4-4

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5.5.2.4 CIMS	5-10
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TABLE OF CONTENTS FORMAT**Exhibit 4-4 (Cont'd)**

LIST OF EXHIBITS

EXHIBIT	Page
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A-5 Miscellaneous Category	A-14
A-6 Raw Scores.....	A-19
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LIST OF EXHIBITS FORMAT

Exhibit 4-5

LIST OF ACRONYMS

ADS	Automated Document System
AVLOS	Automated Visa Lookout System
BDAM	Basic Direct Access Method
BPA	Blanket Purchasing Agreement
CAPPS	Consolidated American Payroll Processing System
CC	Communications Center
CCI	CICS Charging Interface
CFMS	Central Financial Management System
CICS	Customer Information Control System
CIMS	Computer Installation Management System
CLASS	Consular Lookout and Support System
DAMS	Direct Access Measurement System
DAS	Data Acquisition System
DASD	Direct Access Storage Device(s)
DBI	DB2 Charging Interface
DBMS	Database Management System
DIS	Data Inquiry System
DO	Domestic Operations
DOS	Department of State
DS	Digital Systems
FADPC	Foreign Affairs Data Processing Center
FAIS	Foreign Affairs Information System
FAM	Foreign Affairs Manual
FINMAN	Financial Management System
FO	Foreign Operations
FOIA	Freedom of Information Act

LIST OF ACRONYMS FORMAT**Exhibit 4-6**

LIST OF ACRONYMS (Cont'd)

IAA	Inter-Agency Affairs
ICI	IMS/VS Charging Interface
IDCI	IDMS Charging Interface
IDMS	Integrated Data Management System
IM	Information Management
IMS	Information Management System
IS	Information Services
ISPF	Interactive System Productivity Facility
ITF	Information Technology Facility
JARS	Job Accounting and Reporting System
JES	Job Entry Subsystem
MICS	MVS Integrated Control System
MVS/XA	Multiple Virtual Storage/Extended Architecture
OCC	Object Classification Code
OMB	Office of Management and Budget
OSCAR	Overseas Case Activity Reporting System
PA	Personnel Annuitant
PD	Planning and Development
PERFS	Personnel for Side System
PMA	Performance Management Activity
RAMC	Regional Administrative Management Center
RM	Resource Management
RMF	Resource Management Facility
SADI	Secretariat's Automated Document Inventory
SAS	Statistical Analysis System
SMF	System Management Facility
SMP	System Modification Program

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LIST OF ACRONYMS FORMAT**Exhibit 4-6 (Cont'd)**

4.11 Exhibit Format

Place an exhibit so that it immediately follows the first mention of it in the text, either on the same page or the next page. Consecutively number exhibits within each section. Exhibits in appendices will reflect the appendix letter followed by the number of the exhibit, e.g., A-1, B-1.

Exhibit 4-7 illustrates an exhibit placed within text. To present exhibits or tables surrounded by text above and below, enter two blank lines of space after the last line of text where the exhibit is to be inserted. Enter a margin-to-margin line across the page, then enter the exhibit.

SYMBOL	DIVISION NAME	PHONE
KRA	Federal Systems Management Division	703-756-4111
KRD	Federal Systems Integration and Management Division	703-756-4162
KRE	Federal Systems Acquisition Division	703-756-4201
KRF	Federal Computer Acquisition Division	617-863-0104
KRO	Federal Office Systems Division	703-756-6900
KRS	Federal Software Management Division	703-756-4500
KRT	Federal Information Systems Division	703-756-4227
KRX	Resources Management and Administration Division	703-756-6151

EXAMPLE OF A TABLE

Exhibit 4-7

After the exhibit, enter a margin-to-margin line followed by one blank line of space. Center the exhibit title in all capital letters, double space, and center the word “Exhibit” followed by the exhibit identification (ID) number. Enter two blank lines of space and continue with the text.

If two or more exhibits appear consecutively on the same page, allow four lines of blank space between them.

If an exhibit needs an entire page of space, devote the next page (after its mention in the text) to the exhibit. Center the title of the full-page exhibit five lines above the page number line, i.e., two blank lines of space should appear between the page number and the exhibit ID.

When an exhibit must be placed horizontally on the page, locate the exhibit title and exhibit ID so that there is a one-inch right margin.

If the material for an exhibit exceeds the margin limits, it may be necessary to reduce the exhibit. Do not reduce the exhibit title and exhibit ID. This may require a cut-and-paste procedure to create camera-ready copy.

If necessary, it is permissible to use a fold-out exhibit, e.g., to allow for a large spreadsheet.

If it is necessary to continue an exhibit on another page, type (Cont'd) after the exhibit ID. Type the complete exhibit title and exhibit ID on the second and subsequent pages.

The exhibit title and exhibit ID appear below the exhibit, as illustrated in all exhibits in this guide. It is permissible, for attention, emphasis, or page esthetics also to use a major heading at the top of an exhibit.

4.11.1 Notes in Exhibits

Use symbols (e.g., asterisks), numbers, and the words NOTE or SOURCE to note information in exhibits. Symbols are best for noting quantified information. Numbers are good for noting exhibit headings. Place exhibit notes between the body of the exhibit and the exhibit title, as shown in Exhibit 4-8. Consecutively number the notes in each exhibit independently. Raise (superscript) the numbers. Do not repeat exhibit notes in the notes section (if any) located in the document reference matter.

If the origin of an exhibit is other than the document author, reference its source immediately below the exhibit but above the title. Examples of exhibits that might need to be referenced are organization charts, hardware configurations, and site maps prepared by other organizational components or individuals.

When using the heading NOTE, follow the spacing guidelines for notes (see 4.15, Notes Format). Type NOTE in uppercase letters, followed by a colon.

HEADINGS

Data

¹Begin footnote here ; second line wraps to left margin, like this.

*Begin annotation here ; second line wraps to left margin, like this.

NOTE: Begin the notation like this ; second line wraps to left margin, like this.

SOURCE: Begin the source reference this way ; second line wraps to left margin, like this.

FOOTNOTES, ANNOTATIONS, NOTES, AND SOURCES IN EXHIBITS

Exhibit 4-8

4.11.2 Numerical Data in Exhibits

Align numerical data within the same column according to the decimal value of the digits.

534		534
7	NOT	7
5		35

Whenever possible, structure numbers with the same number of significant digits.

5.036		5.03
7.954	NOT	7.9
8.001		8.0001

Place a zero before all numbers having a value between one and minus one, e.g., 0.17, 0.986, -0.5.

4.11.3 Legends in Exhibits

Legends may be used when needed in exhibits. Use a format appropriate to the exhibit and in keeping with the style and format of this guide.

4.12 Vertical List Format

Use the colon after introductory material to introduce any type of vertical list. Other rules to follow are:

- Capitalize the first letter of each line of any list.
- Do not punctuate, unless one or more of the items listed is a complete sentence (as in this list).
- Single space short lists or lists where all the words in each item do not exceed one line.
- Double space between items if the list is long, complex, or when double spacing improves readability.
- Use either bullets or Arabic numerals (and periods) to distinguish items in lists.
- Set tabs so that there is a one-space value between the bullet and the first letter of text (or between the period after an Arabic numeral and the first letter of text), as illustrated here, or use the automatic bullet feature of the word processor you are using.

4.12.1 Bulleted Lists

The left margin of the text of bulleted material should wrap, i.e., line up flush with the first letter of the first line of text. Capitalize the first letter of list items.

EXAMPLE 1:

The steps are as follows:

- Prepare data for input.
- Verify information through a series of checks and balances.

EXAMPLE 2:

The committee recommends that we:

- Accept the rules
- Publish them
- Submit them for review

EXAMPLE 3:

Types of future workload information include:

- Increases or decreases in use of existing hardware or software systems
- Modifications of existing software systems
- Development of new application systems
- Projected changes in service requirements for existing workloads
- Automation of functions previously done manually

4.12.2 Numbered Lists

FEDSIM prefers bullets over numbers for lists. But, the use of bullets vs. Arabic numerals is a judgment call to be made by the writer. As with bullets, the left margin of the text of numbered material should wrap, i.e., line up flush with the first letter of the first line of text. Capitalize the first letter of list items.

EXAMPLE:

The steps are as follows:

1. Prepare data for input.
2. Verify information through a series of checks and balances.

4.12.3 Lists Within Lists

Use diamonds or double bullets for a list within a list, indented directly under the first letter of text of the line above.

EXAMPLE:

Recommended improvements fall into three categories:

- Conversions
 - ◊ IBM 360/70
 - ◊ UNIVAC 1108
- Refinement
- Enhancements
 - ◊ Update software
 - ◊ Purchase major hardware

Use a dash if a third indentation is necessary.

EXAMPLE (from a FEDSIM Governmentwide publication):

- | |
|---|
| <ul style="list-style-type: none">• Implementing Cost Recovery and Enhancing the System. Agencies should first implement a basic capability for reporting costs to users but without making actual funds transfers. Once this system has operated successfully for 1-2 years, cost recovery is implemented.<ul style="list-style-type: none">◊ Implementing full-scale cost recovery requires:<ul style="list-style-type: none">– A new funding mechanism to distribute appropriations for data processing support to user organizations– A method for initially funding the ITF, handling year-end operational profits and losses, and accomplishing major multi-year procurements– Interfaces with the agency's cost accounting system◊ Enhancing the charging system requires:<ul style="list-style-type: none">– Improvements, such as automation of the rate-setting and billing subsystems– Incorporation of services (e.g., variable rates, volume discounts) in the charging system not covered in the basic system |
|---|

Consider rearranging the material to avoid any further indentation. When unavoidable, use a double dash for the next breakdown.

4.13 Quoted Material Format

Use footnotes, notes (endnotes), or explanations within the narrative to attribute written or graphic material quoted, paraphrased, revised, or otherwise used in a document. Short (under 100 words) prose quotations may appear within the regular body of the text (i.e., enclosed in quotation marks). When quotations are 100 words or more, delete the quotation marks and block indent the quotation. Separate the block quotation from the body of the text by a double space at the beginning and end, and use a smaller font size for the quoted material.

4.14 Equation and Formulae Format

Center equations and formulae in the text between lines of the narrative. Explain the symbols of the equation below the equation. Enter a period after the last explanatory phrase.

EXAMPLE:

If the k-means clustering algorithm is used, a Euclidean distance measure will force the algorithm to produce hyperspherical clusters. This occurs because all points in cluster i will satisfy the equation.

$$\sum_{j=1}^r (u_{ij} - x_j)^2 < R_i^2$$

where:

R_i = the maximum radius of the cluster

u_{ij} = the mean of the j th feature in cluster i

x_j = the value of the j th feature.

There is no reason to expect that whatever natural clusters may exist in the workload data are hyperspherical.

In short equations (involving two or fewer elements in each term), a horizontal format may be used:

$$F = 180/r^2$$

When an equation calls for a multiplication symbol, use the asterisk (*):

$$F = (180*K)/r^2$$

4.15 Notes Format

Report writing conventions allow a variety of note formats. The two most widely used formats are (1) bottom of the page footnotes¹ and (2) a notes section at the back of the document explaining all notes (also referred to as endnotes) placed throughout the document. For consistency in FEDSIM documents, use the notes section format. When preparing notes (endnotes) and the notes section that lists them:

- Put in the text any information crucial to understanding the material. Do not put this information in a note.
- Enter a raised (superscript) Arabic numeral after material to be noted. Preferably, style the note number in 10-point bold and place it after a sentence and outside the end punctuation.
- Consecutively number notes throughout each section.
- Include in the note as much information as necessary. Notes allow additional information to be included without interrupting the flow of the text.
- Place the notes section at the back of the document before the glossary or bibliography. List the notes by document section.
- Do not include notes in exhibits in the notes section.

Exhibit 4-9 illustrates a notes section.

¹When a document cites fewer than five sources, footnotes are acceptable instead of creating a bibliography section (see 2.6.17, Bibliography). Locate the footnote at the bottom of the page.

NOTES

1. INTRODUCTION

1. James Martin, *Programming Real-Time Computer Systems* (Englewood Cliffs, NJ: Prentice-Hall, Inc., 1965), p. 114.
2. John M. Fitch, *Computer Analysis: A Contemporary Guide* (Ithaca, NY: Cornell University Press, 1968), pp. 34-107.

4. COMPUTERS IN THE COMING AGE

1. Herbert Marcuse, "Computers and Social Research," *The Manchester Guardian*, March 14, 1969, p. 36.
2. Ibid., p. 89.

5. SELECTING THE RIGHT COMPUTER

1. John Doe, "Evaluation of DOT Computer Systems" (Washington, DC: FEDSIM, May 1979). Provides a thorough, well developed approach to evaluating systems throughout the department.

Nts-1

EXAMPLE OF A NOTES SECTION

Exhibit 4-9

4.15.1 First Reference

Fully identify a source cited for the first time. The following samples illustrate the standard format for a first reference. Pay special attention to the punctuation marks in these samples. Use commas, colons, parentheses, and quotation marks exactly as illustrated.

- **Standard Reference to a Book**

Give the author's full name, putting the first name first. After a comma, add the title of the book in *italics*. Enter the entire title exactly as it appears on the title page of the book. In parentheses, include the place of publication, name of the publisher, and the date of publication. After a comma, add the page reference, using "p." for a single page (p. 3) or "pp." for multiple pages (pp. 20-35).

James Martin, *Programming Real-Time Computer Systems* (Englewood Cliffs, NJ: Prentice-Hall, Inc., 1965), p. 114.

- **Newspaper or Magazine Article**

Enclose the title of the article in quotation marks. Add the title of the newspaper or magazine in *italics*. Give the date of issue, separated from what precedes and follows by commas. Provide the column number for newspaper articles.

"Computers and the Future," *New York Times*, June 15, 1968, p. 8, col.1.

Herbert Marcuse, "Computers and Social Research," *The Manchester Guardian*, March 14, 1963, p. 36.

If a magazine provides a volume number, give it as an Arabic numeral. Enclose the publication date in parentheses. Give the page number without using "p." or "pp."

Ruth Benedict, "An Approach to Software," *Computer Studies*, 29 (April 1968), 545.

- **Work with a Subtitle**

John M. Fitch, *Computer Analysis: A Contemporary Guide* (Ithaca, NY: Cornell University Press, 1968), pp. 34-107.

- **Edited or Translated Work**

Kenneth Sisam, ed., *Probability and the Man in the Moon* (Oxford: The Clarendon Press, 1943), pp. 2-19.

H. L. Buckner, *Computers and Politics*, ed. Igor Gumbrach (White Plains, NY: Sparrow Press, 1974).

Anton Siegfried, *Computer Technology*, trans. Francis Barber (New York: Doubleday, 1968), p. 227.

M. B. Foreman, *Numbers in Systems*, 3rd ed. (London: Methuen Press, 1960), p. 70.

- **Multivolume Works**

Use a capital Roman numeral to specify the volume number. Place it after the facts of publication cited, and separate it from the rest of the reference by commas. After a volume number, omit "p." and "pp."

William Feller, *An Introduction to Probability Theory and Its Applications*, 3rd ed. (New York: John Wiley & Sons, Inc.), I, 360.

- **Articles in a Collection**

Elisea Vivas, "On-Line Systems in NORAD," *Computer Annual Essays*, ed. G. O. Mockley (New York: Harcourt Brace, 1965), pp. 20-47.

- **Pamphlets and Unpublished Material**

This instruction is for materials other than books and magazines, e.g., a mimeographed pamphlet or an unpublished doctoral dissertation. Start with the title if the item does not give the author or editor. Use quotation marks to enclose unpublished titles. Reference the nature and source of the material.

Grape Harvesting (Sacramento, CA: California Department of Agriculture, 1969), pp. 8-9.

"Evaluation of DOT Computer Systems" (Falls Church, VA: FEDSIM, May 1973), p. 6.

"Systems Study" (Detroit, MI: Internal Revenue Service, 1957), pp. 36-107.

4.15.2 Subsequent Reference

Abbreviate subsequent references to sources already fully identified in a previous footnote or note (endnote). The author's last name, followed by a comma and the appropriate page number(s) generally will suffice.

Doe, p. 17.

Doe, pp. 24-28.

Use "Ibid." to refer to a single work cited in the footnote or note immediately preceding. Do not use the author's name and title of the work with Ibid.

Ibid., 175. (References the page number in the same volume as in the preceding note).

Ibid. (References the same page as in the preceding note.)

If notes include more than one work by the same author, the subsequent reference(s) can be simplified. Enter the author's surname, an abbreviated title of the work referenced, and the page number(s).

Doe, "Evaluation of Systems," p. 38.

Doe, "Dictionary," pp. 47-50.

4.15.3 Expanded Notes (Endnotes)

It is not necessary to restrict notes to publication information. Include any information in a note that will help the reader.

James Martin, *Programming Real-Time Computer Systems* (Englewood Cliffs, NJ: Prentice-Hall, Inc., 1965), p. 114. This book provides an excellent review of programming fundamentals.

4.16 Glossary Format

Place the glossary section (if used) after the notes section and before the bibliography section (if any). Preferably use an uncluttered format, such as that illustrated in Exhibit 4-10.

GLOSSARY

This section clarifies certain terminology used in this document.

Analytical Model

A mathematical representation of the dynamic behavior of a computer system and its workload. Analytical models are based on stochastic queuing theory, which approximately describes the long-term average (i.e., steady state) behavior of a system in a form that can be computed relatively quickly. Contrast analytical models with simulations (q.v.). Generally speaking, analytical models predict the approximate performance of a system to within 10 or 20 percent, while simulations can be arbitrarily precise, depending on the amount of effort expended. Analytical models are much less expensive in computer resources than simulations to execute. Finally, analytical models cannot show the transient (e.g., start-up) behavior of a system, while simulations can.

Capacity Management

Capacity management is the function that plans, measures, and controls the configuration (i.e., hardware, software, features, organization, and facilities) required to meet the information technology facility's current and future information processing requirements. It is a term that encompasses service management, performance management, and capacity planning.

Capacity Management Information

Capacity management information is service, performance, and capacity-related information collected from or reported to users, the information technology facility staff, or higher management.

Capacity Planning

Capacity planning is the function by which the hardware, software, features, organization, and facilities required to deliver acceptable service to users is determined.

Gls-1

EXAMPLE OF A GLOSSARY SECTION

Exhibit 4-10

4.17 Bibliography Format

The entries in a bibliography section generally contain the same information as does the notes section (i.e., author, title, place of publication, publisher, and date).

Do not cite specific page numbers in the bibliography since such entries usually refer to entire works. Exceptions are newspaper articles and separate articles in a magazine, journal, or collections.

List bibliographical entries unnumbered in alphabetical order according to the last name of the author(s), or for instances of unknown author, the name of the publisher.

There are format differences between notes and bibliography sections. On notes entries, the author's first name comes first. In the bibliography, the author's last name comes first. Notes entries wrap to the left margin. Bibliography entries have a hanging indentation. Exhibit 4-11 and the following examples illustrate the format.

- **Reference to a Book**

Doe, John. *Computers in Today's Society*. Hartford, CT: Bantam Books, March 1976.

- **Reference to an Agency Report**

Jones, Mary. "Evaluation of DOT Computer Systems." Washington, DC: Internal Revenue Service, May 1976.

- **Reference to a Newspaper, Magazine, or Journal Article**

Marcuse, Herbert. "Computers and Social Research." *The Manchester Guardian*, March 14, 1963, pp. 28-42.

- **Reference to a Work That Gives No Author**

Begin the reference with, and alphabetize by, the publisher's name.

American National Standards Institute (ANSI). "Advanced Data Communication Control Procedures (ADCCP)," Proposed ANSI Standard X3.66. New York, NY: ANSI, 1978.

BIBLIOGRAPHY

American National Standards Institute (ANSI), "Advanced Data Communication Control Procedures (ADCCP)," Proposed ANSI Standard X3.66, New York, NY: ANSI, 1978.

Doe, John. *Computers in Today's Society*. Hartford, CT: Bantam Books, March 1976.

Jones, Mary. "Evaluation of DOT Computer Systems." Washington, DC: Internal Revenue Service, May 1976.

Marcuse, Herbert. "Computers and Social Research." *The Manchester Guardian*, March 14, 1963, pp. 28-42.

Watkins, S.W. and Abrams, M.D. "Remote Terminal Emulation in the Procurement of Teleprocessing Systems," in 1977 National Computer Conference: Conference Proceedings, Montvale, NJ: June 1977, pp. 723-727.

_____. "Survey of Remote Terminal Emulators." Special Publication 500-4. Washington, DC: National Bureau of Standards, April 1977.

Bbl-1

EXAMPLE OF A BIBLIOGRAPHY SECTION

Exhibit 4-11

- **Reference to the Same Author for Several Works**

A solid line signals that the previous author is the same. Further alphabetize such references by title.

Watkins, S. W., and Abrams, M. D. "Remote Terminal Emulation in the Procurement of Teleprocessing Systems," in 1977 National Computer Conference: Conference Proceedings. Montvale, NJ: June 1977, pp. 723-727.

_____. "Survey of Remote Terminal Emulators." Special Publication 500-4. Washington, DC: National Bureau of Standards, April 1977.

4.18 Appendix Format

Identify appendices with uppercase letters, e.g., Appendix A, Appendix B. Precede each appendix with a title page (see Exhibit 4-12).

When subdividing the material in an appendix, follow the same heading numbering scheme presented in this guide, but substitute the uppercase letter in the appendix title for the first section (Arabic) number, as illustrated in Exhibit 4-13.

4.18.1 Page Numbering Within the Appendix

Consecutively number the pages in an appendix, preceded by the letter of the appendix title and a hyphen, e.g., page A-1 is the number for the title page of Appendix A.

4.18.2 Separate Page Numbering or Binding

Do not renumber the pages when including as appendices already numbered material (e.g., material originally created for another purpose).

When appendices are large, such as computer listings, it may be advisable to bind them separately. When appendices are separately bound, note this information in the table of contents, as illustrated in Exhibit 4-14.

It may be useful to divide a document into volumes for separate binding (see Exhibit 4-15). Separate volumes would be appropriate when one or more appendices include classified material that needs to be transmitted "under separate cover."

Appendix B
USER SERVICE-LEVEL AGREEMENT

B-1

SAMPLE APPENDIX TITLE PAGE

Exhibit 4-12

APPENDIX B. USER SERVICE-LEVEL AGREEMENT

B.1 Identification of the Parties

The service-level agreement should identify the parties involved (i.e., the information technology facility [ITF] and the organizational entity [user] that will be presenting work for service).

B.2 Workload Description

The user is responsible for providing an estimate of the workload associated with each application in natural forecasting units (NFUs). If the workload includes both batch and on-line processing, a two-part workload description must be created.

B.3 Service Levels

Users are concerned with timeliness, availability, and accuracy.

B.3.1 Timeliness

Timeliness measures (i.e., response time, turnaround time, and deadlines) should be defined for each major application in terms relevant to the user's perception.

B.3.1.1 Response Time

Response time is usually measured in seconds. Response time should be the time for the response to return to the terminal - not the internal response time recorded by software tools. The key to constructing an achievable response time objective is agreeing upon an average response range and the percentage of time that the average will be met (e.g., "On-line inquiries will, on average, be processed between one and three seconds 95 percent of the time."). Of course, short-term growth and unexpected problems should be considered before agreement.

B-3

SAMPLE FIRST PAGE OF APPENDIX

Exhibit 4-13

TABLE OF CONTENTS (Cont'd)

	Page
6. CONCLUSIONS AND RECOMMENDATIONS	
6.1 Conclusions	6-1
6.2 Recommendations	6-3
NOTES	Nts-1
GLOSSARY	Gls-1
BIBLIOGRAPHY	Bbl-1
Appendix A - SUGGESTED READING	A-1
Appendix B - USER SERVICE-LEVEL AGREEMENT	B-1
Appendix C - USER SURVEY	C-1
Appendix D - USER SURVEY STATISTICS	D-1
Appendix E - USER SURVEY COMPLETED QUESTIONNAIRES (separately bound, unpagged)	

**EXAMPLE OF TABLE OF CONTENTS
NOTING A SEPARATELY BOUND APPENDIX**

Exhibit 4-14

TABLE OF CONTENTS

	Page
1. INTRODUCTION	
1.1 Background	1-1
1.2 Objective	1-1
1.3 Intended Audience.....	1-2
2. STUDY ENVIRONMENT	
2.1 Clarification of Terms and Concepts.....	2-1
2.2 Communications Environment.....	2-4
3. ASSUMPTIONS AND CONSTRAINTS	3-1
4. METHODOLOGY	4-1
5. ANALYSIS AND FINDINGS	
5.1 Requirements Gathering.....	5-1
5.2 Architecture Development	5-4
5.2.1 Architectural Elements	5-4
5.2.2 Element Interrelationships.....	5-5
5.2.3 Element Evaluation	5-6
5.3 Implementation Strategy Development.....	5-11
6. CONCLUSIONS AND RECOMMENDATIONS	
6.1 Conclusions	6-1
6.2 Recommendations	6-3
GLOSSARY.....	Gls-1

VOLUME II -- APPENDICES A THROUGH D (Working Papers, separately bound)

EXAMPLE OF TABLE OF CONTENTS FOR A DOCUMENT ARRANGED IN VOLUMES

Exhibit 4-15

TABLE OF CONTENTS (Cont'd)**VOLUME I -- FINAL REPORT** (separately bound)**VOLUME II -- APPENDICES A THROUGH D** (Working Papers)

	Page
1. INTRODUCTION	1-1
Appendix A - REVIEW	A-1
(Working Paper, Task 1)	
Appendix B - REFINED COMMUNICATIONS APPROACHES	B-1
(Working Paper, Task 2)	
Appendix C - OPTIMUM COMMUNICATIONS APPROACH	C-1
(Working Paper, Task 3)	
Appendix D - IMPLEMENTATION STRATEGY	D-1
(Working Paper, Task 4)	

x

**EXAMPLE OF TABLE OF CONTENTS
FOR A DOCUMENT ARRANGED IN VOLUMES**

Exhibit 4-15 (Cont'd)

4.19 Client-dictated Formats

FEDSIM clients occasionally require documents in a particular format. In these instances, FEDSIM treats the client's specially-formatted document as a stand-alone appendix and attaches FEDSIM front matter, i.e., usually title page, foreword, executive summary, table of contents, and introduction. FEDSIM gives the client a few bound copies and an unbound copy from which the client can pull the stand-alone part as camera-ready copy. The stand-alone appendix should have all necessary parts, including a cover page, table of contents, etc., as required by the client.

Clients have on occasion asked for pages to be labeled "For Official Use Only." This can be easily accomplished by use of headers and footers, if satisfactory to the client.

5. DOCUMENT REPRODUCTION

This section provides guidelines for reproducing and binding FEDSIM documents. Unless otherwise agreed to, FEDSIM provides clients two copies of drafts for review and comment and five copies of final versions. Unless otherwise agreed to, FEDSIM, not its contractor, performs the final document reproduction procedures described in this section.

5.1 Drafts and Working Papers

Do not use preprinted covers, and do not bind drafts or working papers. Bind with staples or clasps. If desired, place a loose FEDSIM cover over the material, but do not bind. Bound documents imply that the document is final.

5.2 Final Versions

Use preprinted covers to bind final versions of reports and technical products. Ensure that the document title and FEDSIM project number show through the cover window. Do not use preprinted covers for letters of findings.

For all final versions of reports and technical products, embed the name FEDSIM in 24-point type in the header of the front matter pages, as was done in the production of this document. Embed the FEDSIM title page logo on the cover page, as was also done in the production of this document.

5.3 One-sided Reproductions

Preferably, reproduce documents of 40 pages or less on one side of the paper only. Include all document pages in the count: front matter, document body sections, and reference matter. (The releasing authority can approve exceptions to this requirement.)

5.4 Two-sided Reproductions

Preferably, reproduce documents of more than 40 pages using both sides of the paper. (The releasing authority can approve exceptions to this requirement.)

Begin each distinct document component (e.g., executive summary, table of contents, document body sections) on an odd-numbered, facing page. When preparing master copies, create numbered blank pages when needed to accommodate accurate reproduction sequences.